

AMENDMENTS TO THE DRAWINGS:

The attached drawing sheet includes one (1) replacement sheet replacing original sheet 1, with amended Figure 1 and Figure 2.

Specifically, the drawings are objected to for not showing underlying chip wiring. The amendment to the drawings, replaces one instance of “116” labeling underlying chip wiring with 105 in Figure 1, as required by the Examiner. No new matter is added. Entry of the amendment is respectfully request.

REMARKS

This preliminary amendment is being filed with a Request for Continued Examination (RCE) in response to a final Office action (Final) dated July 10, 2008. Claims 1 – 5, 7 – 14 and 21 – 25 remain in the application were finally rejected. Claims 1, 5, 8, 12, 14, 21 and 25 are amended herein. Claims 6 and 15 – 20 are previously canceled. No new matter is added by this amendment.

The Final objected to the drawings for not showing labeling two layers with “116.” Responsive thereto, Figure 1 is amended on the enclosed replacement sheet. Specifically, the amendment to the drawings replaces one instance of “116” labeling underlying chip wiring with 105 in Figure 1, as required by the Examiner. No new matter is added. Entry of the amendment is respectfully request.

The Final objected to claims 8 and 14. The objection is obviated by the amendment to claims 8 and 14. No new matter is added. Independent consideration of claims 8 and 14 is respectfully requested.

In the Final, claims 1, 2, 5 and 7 were rejected under 35 U.S.C. §102(e) over U.S. No. 6,534,863 to Walker et al. Also in the Final, claims 3, 4, 8 – 14 and 21 – 25 were rejected under 35 U.S.C. §103(a) over Walker et al., alone, in view of U.S. Patent No. 6,144,096 to Lopatin., alone, or further in view of U.S. Patent No. 6,798,050 to Homma et al. and published U.S. application No. 2003/0034489 to Bhattacharya et al.

In the previously filed amendment, the applicants noted that Walker et al. fails to teach or suggest a conducting layer pad, a hard test barrier layer on the pad and a plate passivating layer on the hard test barrier layer as the claims recite, to allow “finer C4 pitch, e.g., 3 mil bumps and smaller.” Application, paragraph 0018. The Final responds to this, asserting that it is not recited in the claims and that the applicant has not pointed

to any claimed features not shown in Walker et al. Claims 1, 5, 8, 12, 14, 21 and 25 are amended herein to reflect that after probing the pads, C4s can be formed on minimum pitch because those C4s are not damaged by probing.

Walker et al. teaches forming a “second electroplated layer 26 is formed over the first electroplated layer 24, which will serve as the pad for the common I/O site.” Col. 4, lines 38 – 57 and col. 5, lines 1 – 3. Solder 45 is electroplated to that second electroplated layer 26. *Id*, lines 57 – 60. So, these Walker et al. solder capped pads remain electrically connect together, at least until after the solder 45 is electroplated. Therefore, the Walker et al. pads are not usable for performance testing until the Walker et al. conductive barrier layer 22 is selectively removed. *Id*, lines 65 – 66. Nor is an array of pads defined before the Walker et al. conductive barrier layer 22 is selectively removed. Further, since the Walker et al. pads terminate with solder, the hard test barrier layer is unprobable during performance test.

Therefore, Walker et al. fails to teach or suggest the present invention, as recited in claims 1 – 5, 7 – 14 and 21 – 25; and therefore, claims 1 – 5, 7 – 14 and 21 – 25 are patentable under 35 U.S.C. §§102(e) and 103(a) over Walker et al., alone or further in combination with any other reference of record. Independent consideration and allowance of claims 1 – 5, 7 – 14 and 21 – 25 is respectfully requested.

The applicants thank the Examiner for efforts, both past and present, in examining the application. Believing the application to be in condition for allowance, both for the amendment to the claims and for the reasons set forth above, the applicants respectfully request that the Examiner consider claims 1 – 5, 7 – 14, and 21 – 25 and allow the application to issue.

As previously noted, the applicants believe that the matter presented in the written description of the present application is quite different than, and not suggested by, any

Preliminary Amendment
January 8, 2009

FIS920030352US1
Serial No.: 10/707,892

reference of record. Accordingly, should the Examiner believe anything further may be required, the Examiner is requested to contact the undersigned attorney at the local telephone number listed below for a telephonic or personal interview to discuss any other changes.

Please charge any deficiencies in fees and credit any overpayment of fees to IBM Corporation Deposit Account No. 09-0458 and advise us accordingly.

Respectfully Submitted,

January 8, 2009
(Date)

/Charles W. Peterson, Jr., # 34,406/
Charles W. Peterson, Jr.
Registration No. 34,406

Customer No. 51872
Law Offices of Charles W. Peterson, Jr.
435B Carlisle Dr.
Herndon, VA 20170
Telephone: (703) 481-0532
Facsimile: (703) 481-0585

Preliminary Amendment
January 8, 2009

FIS920030352US1
Serial No.: 10/707,892

APPENDIX